Wherefore, what is claimed is:

1. A camera system for capturing images of a whiteboard comprising:

5 a boom positioned above a whiteboard;

a view camera mounted to the distal end of said boom and adjusted so as

to capture an in focus uniform resolution image of said entire whiteboard.

2. The camera system of Claim 1 wherein said camera is adjusted to

10 provide an in focus uniform resolution image of said entire whiteboard by,

adjusting the position of said view camera on said boom so that the

camera's depth of field covers the portion of the whiteboard it is desired to

capture as an image;

adjusting the tilt angle of the camera's sensing surface to be

15 approximately parallel to the plane of the whiteboard; and

adjusting the distance between the center of projection of the camera and

the camera's sensing surface to provide optimum focus.

3. The camera system of Claim 1 further comprising a mounting

20 device for mounting said boom to be positioned above said whiteboard.

4. The camera system of Claim 3 wherein said mounting device

mounts on a rail at the top portion of said whiteboard.

5.   The camera system of Claim 3 wherein said mounting device

mounts on a surface above the surface the whiteboard is mounted to.

6.   The camera system of Claim 3 wherein said system comprises

more than one type of device for mounting said boom to be positioned above

said whiteboard and wherein said types of devices for mounting said boom to be

positioned above said whiteboard are interchangeable.

7.   The camera system of Claim 1 further comprising a microphone

device for capturing audio synchronized with each image captured by said view

camera.

8.   The camera system of Claim 7 wherein said microphone device is

a microphone array.

9.   The camera system of Claim 8 wherein said audio captured by said

microphone array is used for sound source localization.

10.   The camera system of Claim 7 wherein said microphone device is

used to improve the sound quality of a speaker by filtering sound from only the

direction of the speaker.

11. The camera system of Claim 1 further comprising a computer to enhance the whiteboard image.

12. The camera system of Claim 11 wherein said computer enhances said whiteboard image by white-balancing the image of the whiteboard to provide an image of the whiteboard with uniform white background color.

13. The camera system of Claim 11 wherein said computer enhances said whiteboard image by removing shadows on the whiteboard in the image.

14. The camera system of Claim 11 wherein said computer enhances whiteboard image by segmenting non-whiteboard objects from the image of the whiteboard.

15. A process of capturing images of a whiteboard, comprising the following process actions:

positioning a view camera above a whiteboard at the end of a boom so as to capture images of a desired portion of the whiteboard;

adjusting the camera before capturing said images to provide uniform resolution in-focus images of said whiteboard.

16. The process of Claim 15 wherein the process action of adjusting the camera comprises:

computing the focal length that will provide said uniform resolution and in-focus images of the whiteboard, and

setting the camera's focal length to the computed focal length

17.   The process of Claim 15 wherein the process action of adjusting the camera comprises:

computing the focal length that will provide said uniform resolution and in-focus images of the whiteboard; and

automatically setting the camera's focal length to the computed focal length.

18.   The process of Claim 17 wherein the process action of computing the focal length comprises:

inputting the whiteboard width, whiteboard height, the height of the whiteboard as imaged by the camera H_{wb}, the horizontal distance D between the whiteboard and the center of projection of the camera (C), the height of the image sensor H_s, and vertical distance between C and the top of the whiteboard H_c;

setting a tilt angle α of the image sensor with the vertical axis to be approximately parallel with respect to the plane of the whiteboard; and

computing the focal length as

$$f = H_s \csc(\theta)\sin(90 + \alpha - \theta - \tan^{-1}(H_c / D))\sin(90 - \alpha + \tan^{-1}(H_c / D))$$

wherein $\theta = 90 - (\tan^{-1}(H_c / D) + \tan^{-1}(D/(H_{wb} + H_c)))$.

19.　The process of Claim 15 further comprising the process action of sending said images to a server that broadcasts or records the images

5　　　20.　The process of Claim 15 further comprising the process action of capturing audio that is synchronized with said captured images.

21.　The process of Claim 20 further comprising the process action of sending said images to a server that broadcasts or records the images and
10　synchronized audio.

22.　A computer-readable medium having computer-executable instructions for viewing or recording images of a whiteboard using a view camera positioned to have a view of a whiteboard and adjusted so as to capture an in
15　focus, uniform resolution image of the whiteboard, said computer executable instructions comprising:

inputting whiteboard width, whiteboard height, the height of the whiteboard as imaged by the camera H_{wb}, the horizontal distance D between the whiteboard and the center of projection of the camera (C), the height of the image sensor
20　H_s, and vertical distance between C and the top of the whiteboard H_c; and

setting a tilt angle α of the image sensor with the vertical axis to be approximately parallel with respect to the plane of the whiteboard;

computing the focal length as

$$f = H_s \csc(\theta) \sin(90 + \alpha - \theta - \tan^{-1}(H_c/D)) \sin(90 - \alpha + \tan^{-1}(H_c/D))$$

wherein $\theta = 90 - (\tan^{-1}(H_c/D) + \tan^{-1}(D/(H_{wb} + H_c)))$.

23. A process of capturing images of a whiteboard from multiple vantage points, comprising the following process actions:

positioning more than one view camera at a fixed distance from a whiteboard so as to view the whiteboard; and

adjusting each of said view cameras so as to capture uniform resolution, in-focus images of said whiteboard.

24. The process of Claim 23 further comprising the process action of:

simultaneously capturing images with each of said view cameras; and

selecting an image that provides an unobstructed view of the whiteboard from among the simultaneously captured images.

25. A camera system for capturing images of a whiteboard comprising:

a view camera positioned and adjusted so as to capture an in-focus uniform resolution image of a whiteboard.

26. The camera system of Claim 25 wherein said view camera is adjusted so as to provide an in-focus uniform resolution image of said whiteboard by,

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adjusting the position of said view camera so that the camera's depth of field covers the portion of the whiteboard it is desired to capture as an image;

adjusting the tilt angle of the camera's sensing surface to be approximately parallel to the plane of the whiteboard; and

5   adjusting the distance between the center of projection of the camera and the camera's sensing surface to provide optimum focus.

27.   The camera system of Claim 25 wherein said view camera is mounted on a table and positioned so as to have a view of said whiteboard.

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28.   The camera system of Claim 27 wherein said view camera is mounted on a wall and positioned so as to have a view of said whiteboard.

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